

HIGH FREQUENCY POWER AMPLIFIER

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ABSTRACT

A CMOS amplifier includes a CMOS inverter and a bias circuit coupled in a feedback loop between the output and input of the inverter. The bias circuit provides linear biasing so that the inverter can apply a desired gain to a high frequency input signal. The bias circuit can include an operational amplifier (op-amp) providing positive feedback control between the output and input of the inverter. By providing a reference voltage to the other input of the op-amp, the input of the inverter is regulated such that its output is driven to the reference voltage. This in turn forces the inverter to operate in its linear region, so that the inverter applies non-distorting amplification to the input AC signal. The AC signal is prevented from affecting the operation of the bias circuit by resistors coupling the bias circuit to the op-amp.